

CLAIMS

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1. Method for rapidly establishing a communication, particularly a Bluetooth type communication, between at least one reader (1) and a plurality of communicating objects (2), particularly in the form of chips; each communicating object and said reader (1) having a communication protocol; each communicating
10 object (2) having a communication address;

said method comprising:

- the step of defining a unique communication address for all of the communicating objects (2)

- the step, for said reader (1), of determining whether at least one
15 communicating object (2) is present in the environment in which said reader (1) is located, by sending a request (4) to the unique communication address of all the communicating objects (2);

said method also comprising the following steps:

- the step, for each communicating object (2) that receives said request (4), of
20 revealing its presence to said reader (1) by sending a response signal that is time-shifted relative to the response signals sent by the other communicating objects (2),

- the step, for each communicating object (2), of inserting into said response signal (6) to said request (4), a piece of information specific to said communicating object (2) in question;

25 thus reducing the time required to determine whether at least one communicating object (2) is present.

2. Method according to claim 1; said reader (1) being associated with a mobile telephone unit, particularly a GSM unit; said method also comprising the
30 following steps:

- the step, for said communicating object (2), of detecting the GSM signals sent by said mobile telephone unit (9),

- the step, for said communicating object (2), of activating, based on the GSM signals thus detected, the sending of said response signal (6) to said request (4);

5 thus making it possible to reduce the power consumption of the communicating object (2) by activating the sending of the response signal (6) only at the appropriate time.

3. Method according to either of claims 1 and 2; said communication
10 protocol comprising standby phases and active phases; said method also comprising:

- the step of adapting the duration of the standby phases to the number of requests (4) sent by said readers.

4. Method according to any of the preceding claims, also comprising the
15 step of establishing a Bluetooth type connection between said reader (1) and said communicating object (2) in question, using a piece of specific information received from said communicating object (2).

5. Method according to any of claims 1 through 4; said method also
20 comprising the following steps:

- the step of giving one of said communicating objects (2) the status of master communicating object (12) relative to the other communicating objects (2), which have the status of slave communicating objects (13),

- the step, for said master communicating object (12), of collecting the
25 communication address and/or said specific information from the slave communicating objects (13),

- the step, for said master communicating object (12), of responding to the requests (4) sent by said reader (1);

so that the reader (1) collects all of the information from the communicating
30 objects (2).

6. Method according to claim 5; said method also comprising:

- the step, for said master communicating object (12), of transferring to another communicating object (2) the status of master communicating object (12).

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7. Method according to claim 6; said method also comprising the following steps:

- the step, for the previous master communicating object (12), of communicating to the new master communicating object (12) the information it has concerning the other communicating objects (2),

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- the step, for the new master communicating object (12) of verifying the information from the previous master communicating object (12).

8. Method according to any of the preceding claims, said method being activated by means of an application, said application allowing the method to be activated by a simple action, particularly a click, from a user of the communicating object (2).

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9. System for rapidly establishing a communication, particularly a Bluetooth type communication, between at least one reader (1) and a plurality of communicating objects (2), particularly in the form of chips; each communicating object (2) and said reader (1) having a communication protocol; each communicating object (2) having a communication address; all of the communicating objects (2) having the same unique communication address;

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25 said system being such that:

- said reader (1) comprises first sending means (3) for sending a request (4) to the unique communication address of all the communicating objects (2);

- each communicating object (2) that receives said request (4) comprises second sending means (5) for sending a response signal (6) that is time-shifted relative to the response signals (6) sent by the other communicating objects (2);

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so that each communicating object (2) reveals its presence;

thus allowing said reader (1) to rapidly determine whether at least one communicating object (2) is present in the environment in which said reader (1) is located;

5 said system also being such that each communicating object (2) comprises data processing means (8) for inserting into said response signal (6) to said request (4) a piece of information specific to said communicating object (2) in question.

10 10. System according to claim 8; said reader (1) being associated with a mobile telephone unit (9), particularly a GSM unit; said system being such that:

- each communicating object (2) comprises detection means (10) for detecting the GSM signals sent by said mobile telephone unit (9),

15 - each communicating object (2) comprises activation means (11) for activating, based on the GSM signals thus detected, the sending by said second sending means (5) of said response signal (6) to said request (4);

thus making it possible to reduce the power consumption of the communicating object (2) by activating the sending of the response signal (6) only at the appropriate time.

20 11. System according to either of claims 8 and 9; said communication protocol comprising standby phases and active phases; said system being such that said data processing means (8) of said communicating object (2) adapt the duration of the standby phases to the number of requests (4) sent by said readers.

25 12. System according to any of claims 8 through 11, said system being such that said reader (1) and said communicating object also comprise connection means for establishing a Bluetooth type connection between said reader (1) and said communicating object (2) in question, using a piece of specific information received from said communicating object (2).

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13. System according to any of claims 8 through 12; said system being such that:

- said data processing means (8) make it possible to give one of said communicating objects the status of master communicating object (12) relative to the other communicating objects, which have the status of slave communicating objects (13),

- said data processing means (8) of said master communicating object (12) make it possible to collect the communication address and/or said specific information from each slave communicating object (13),

- said data processing means (8) of said master communicating object (12) make it possible to respond to the requests (4) sent by said reader (1);

so that the reader (1) collects all of the information from said communicating objects (2).

14. System according to claim 13; said system being such that said data processing means (8) make it possible to transfer to another communicating object (2) the status of master communicating object (12).

15. System according to claim 14; said system being such that:

- said data processing means (8) allow the previous master communicating object (12) to communicate to the new master communicating object (12) the information it has concerning the other communicating objects (2),

- said data processing means (8) of the new master communicating object (12) making it possible to verify the information from the previous master communicating object (12).

16. System according to any of claims 8 through 15, said system being such that the communicating object (2) is linked to an application module that makes it possible to trigger the establishment of the communication, said application module

being activated by a simple action, particularly a click, from a user of the communicating object (2).

17. Communicating object, particularly in the form of a chip, that makes it possible to rapidly establish a communication, particularly a Bluetooth type communication, between at least one reader (1) and said communicating object (2); said communicating object (2) and said reader (1) having a communication protocol; said communicating object (2) having a communication address; all of said communicating objects (2) having the same unique communication address; said reader (1) comprising first sending means (3) for sending a request (4) to the unique communication address of said communicating object (2);

said communicating object comprising:

- receiving means (14) for receiving said request (4) from said reader (1),
 - second sending means (5) for sending a response signal (6) that is time-shifted relative to the response signals sent by the other communicating objects (2);
- so that each communicating object (2) reveals its presence;

thus allowing each reader (1) to rapidly determine whether at least one communicating object (2) is present in the environment in which said reader (1) is located;

said communicating object also comprising data processing means (8) for inserting into said response signal (6) to said request (4) a piece of information specific to said communicating object (2) in question.

18. Communicating object according to claim 17; said reader (1) being associated with a mobile telephone unit (9), particularly a GSM unit; said communicating object comprising:

- detection means (10) for detecting the GSM signals sent by said mobile telephone unit (9),

- activation means (11) for activating, based on the GSM signals thus detected, the sending by said second sending means (5) of said response signal (6) to said request (4);

thus making it possible to reduce the power consumption of the communicating object (2) by activating the sending of the response signal (6) only at the appropriate time.

19. Communicating object according to either of claims 17 and 18; said communication protocol comprising standby phases and active phases; said communicating object being such that said data processing means (8) of said communicating object (2) adapt the duration of the standby phases to the number of requests (4) sent by said readers.

20. Communicating object according to any of claims 17 through 19, said communicating object comprising connection means for establishing a Bluetooth type connection between said reader (1) and said communicating object (2) in question, using a piece of specific information received from said communicating object (2).

21. Communicating object according to any of claims 17 through 20; said communicating object being such that:

- said data processing means (8) make it possible to give one of the communicating objects the status of master communicating object (12) relative to the other communicating objects, which have the status of slave communicating objects (13),

- said data processing means (8) of said master communicating object (12) make it possible to collect the communication address and/or said specific information from each slave communicating object,

- said data processing means (8) of said master communicating object (12) make it possible to respond to the requests (4) sent by said reader (1);

so that the reader (1) collects all of the information from said communicating objects (2).

22. Communicating object according to claim 21; said communicating
5 object being such that said data processing means (8) make it possible to transfer to another communicating object (2) the status of master communicating object (12).

23. Communicating object according to claim 22; said communicating object being such that:

10 - said data processing means (8) allow the previous master communicating object (12) to communicate to the new master communicating object (12) the information it has concerning the other communicating objects (2),

- said data processing means (8) of the new master communicating object (12) make it possible to verify the information from the previous master communicating
15 object (12).

24. Communicating object according to any of claims 17 through 23, said communicating object (2) being linked to an application module that makes it possible to trigger the establishment of the communication, said application module
20 being activated by a simple action, particularly a click, from a user of the communicating object (2).